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**solar**edge SolarEdge Power Optimizer  
Module Add-On for North America  
OP250-LV / OP300-MV / OP400-MV / OP400-EV

	OP250-LV	OP300-MV	OP400-MV	OP400-EV
<b>INPUT</b>				
Rated Input DC Power*	250	300	400	400
Absolute Maximum Input Voltage (Voc)	55	75	75	125
MPPT Operating Range	5-55	5-75	5-75	15-125
Maximum Short Circuit Current (Isc) of connected PV Module	10	10	10	7
Maximum DC Input Current	12.5	12.5	12.5	8.75
Maximum Efficiency		99.5		
Weighted Efficiency		98.8		
Overvoltage Category				
<b>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING INVERTER)</b>				
Maximum Output Current		15		
Operating Output Voltage		5-60		
<b>OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)</b>				
Safety Output Voltage per Power Optimizer		1		
<b>STANDARD COMPLIANCE</b>				
EMC		FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3		
Safety		IEC62109-1 (Class II safety), UL1741		
Material		UL-94 (9-VA), UV Resistant		
RoHS		Yes		
<b>INSTALLATION SPECIFICATIONS</b>				
Maximum Allowed System Voltage		1000		
Dimensions (W x L x H)		143 x 230 x 45 / 5.63 x 8.26 x 1.75		
Weight		450 / 1.0		
Input Connector		MCA / TPO / H45 / Amphiprep - MA		
Output Wire Type		Double Insulated 6mm <sup>2</sup> MCA		
Output Wire Length		0.95 / 3.0	1.2 / 3.9	1.6 / 5.25
Operating Temperature Range		-40 ~ +65 / -40 ~ +150		
Protection Rating		IP65 / NEMA4		
Relative Humidity		0-100		

PV SYSTEM DESIGN USING A SOLAREGE INVERTER	SINGLE PHASE	THREE PHASE 208V	THREE PHASE 480V
Minimum String Length (Power Optimizers)	8	8	18
Maximum String Length (Power Optimizers)	25	25	50
Maximum Power per String	5250	6000	12750
Parallel Strings of Different Lengths or Orientations	Yes		



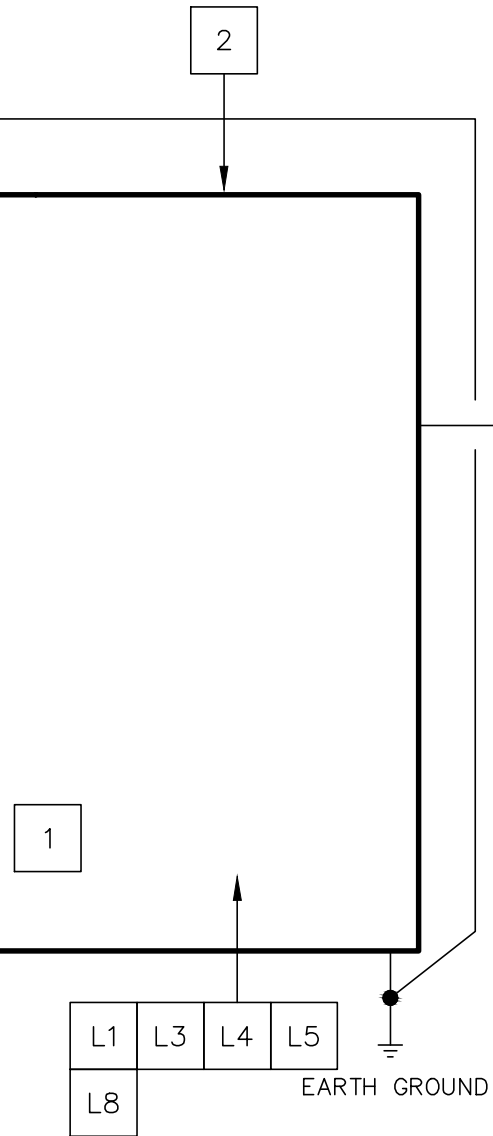
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NEMA 4R JUNCTION BOX  
(4) #10 THWN-2 + #8 GROUND IN 3/4" EMT

(4) #10 THWN-2 + #8 GROUND IN 3/4" EMT

(3) #4 THWN-2 + #8 GROUND IN 1" EMT

NEMA 4R JUNCTION BOX



## SHEET NOTES

### Notes

- 60A two pole breaker size per NEC calculations
- 400A Main panel.
- Provide , 2-Pole 240V, Square D Disconnect, model du222nr
- Provide #6 solid copper ground (EGC) continuous to array components (Racks, Panels, Optimizers).
- Check for anti-islanding at time of inspection.
- There shall not be any hanging wires underneath the PV panels.
- Unless otherwise noted all conduit shall be 1/2" AFR.
- Run metallic conduit located in attic along bottom of load-bearing members, to the maximum extent possible.
- Modules shall be fire rated class C or better.
- All exposed, single conductor cables shall be #12 TYPE PV USE-2, listed and labeled as (PV) photovoltaic.

L1

PV SYSTEM AC DISCONNECT RATED AC OUTPUT CURRENT-AMPS AC NORMAL OPERATING VOLTAGE-240 VOLTS

AT THE PV DISTRIBUTION CENTER

L2

PHOTOVOLTAIC SYSTEM UTILITY SAFETY DISCONNECT SWITCH.

ARIAL WHITE 3/16" MIN TEXT HEIGHT ON RED BACKGROUND, 3"X3/4" UV RATED

L3

WARNING PV OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

ADJACENT TO THE PV SYSTEM CIRCUIT BREAKER/ARIAL WHITE 1/4" MIN TEXT HEIGHT ON RED BACKGROUND, UV RATED

L4

WARNING ELECTRIC SHOCK HAZARD IF A GROUND FAULT IS INDICATED. NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED.

AT THE PV INVERTER

L5

WARNING DUAL POWER SOURCE IS PHOTOVOLTAIC SYSTEM RATED AC OUTPUT CURRENT 47.5A AC NORMAL OPERATING VOLTAGE 400A at 240V

ARIAL WHITE 3/16" MIN TEXT HEIGHT ON RED BACKGROUND, 3"X3/4" UV RATED ADJACENT TO THE PV SYSTEM CIRCUIT BREAKER

L6

CAUTION: SOLAR CIRCUIT

ARIAL WHITE 3/16" FONT ON RED BACKGROUND, 3.5"X1/2" FADE RESISTANT AFIX LABELS SUCH THAT THEY ARE VISIBLE AFTER INSTALLATION AND APPEAR ON EVERY SECTION OF THE WIRING SYSTEM SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILING OR FLOORS. SPACING BETWEEN LABEL MARKING MUST NOT BE MORE THAN 10 FT AND SHALL BE VISIBLE AT EYE LEVEL FOR VERTICAL RUNS

L8

CAUTION: SOLAR ELECTRIC SYSTEM

THIS MARKING MAY BE PLACED WITHIN THE MAIN SERVICE DISCONNECT. IF THE MAIN SERVICE DISCONNECT IS OPERABLE WITH THE SERVICE PANEL CLOSED, THE MARKING SHOULD BE PLACED ON THE OUTSIDE COVER.

2

SOLAR PHOTOVOLTAIC REQUIRED MARKING/LABELS

SCALE: NONE

## Single Phase Inverters for North America

SE3000A-US / SE3800A-US / SE5000A-US / SE6000A-US / SE7600A-US / SE10000A-US / SE11400A-US

	SE3000A-US	SE3800A-US	SE5000A-US	SE6000A-US	SE7600A-US	SE10000A-US	SE11400A-US
<b>OUTPUT</b>							
Nominal AC Power Output	3000	3800	5000	6000	7600	10000 @ 208V	11400
Max. AC Power Output	3300	4150	5400 @ 208V	6000	8350	10000 @ 240V	12000
AC Output Voltage Min.-Nom.-Max. <sup>(1)</sup>	208V - 240V	208V - 240V	208V - 240V	208V - 240V	208V - 240V	208V - 240V	208V - 240V
AC Output Voltage Min.-Nom.-Max. <sup>(2)</sup>	208V - 240V	208V - 240V	208V - 240V	208V - 240V	208V - 240V	208V - 240V	208V - 240V
AC Frequency Min.-Nom.-Max. <sup>(3)</sup>	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Max. Continuous Output Current	12.5	16	24 @ 208V	25	32	48 @ 208V	47.5
GFDR	1	1	1	1	1	1	1
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>INPUT</b>							
Recommended Max. DC Power <sup>(4)</sup>	3750	4750	6250	7500	9500	12400	14250
DC Input Voltage	50V	50V	50V	50V	50V	50V	50V
Max. Input Voltage	50V	50V	50V	50V	50V	50V	50V
Max. Input Current <sup>(5)</sup>	9.5	13	16.5 @ 208V	18	23	33 @ 208V	34.5
Max. Input Short Circuit Current	45	45	45	45	45	45	45
Reverse Polarity Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ground-Fault Isolation Detection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maximum Inverter Efficiency	97.2	96.2	96.3	96.3	96	96	96
CCC Weighted Efficiency	97.5	96	97.5 @ 208V	97.5	97.5	97.5 @ 208V	97.5
Nighttime Power Consumption	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
<b>ADDITIONAL FEATURES</b>							
Supported Communication Interfaces	RS485, RS232, Ethernet, Z-Wave (optional)						
Revenue Grade Data, ANSI C12.1	Optional <sup>(6)</sup>						
Rapid Shutdown - NEC 2014 690.12	Functionality enabled when SolarEdge rapid shutdown kit is installed <sup>(7)</sup>						
<b>STANDARD COMPLIANCE</b>							
Safety	UL1741, UL1699B, UL1998, CSA 22.2						
Grid Connection Standards	IEEE1547						
Emissions	FCC part15 class B						
<b>INSTALLATION SPECIFICATIONS</b>							
AC output conduit size / AWG range	3/4" minimum / 10-6 AWG						
DC input conduit size / AWG range	3/4" minimum / 10-6 AWG						
Dimensions with Safety Switch (Inch)	30.5 x 12.5 x 7.7	30.5 x 12.5 x 7.7	30.5 x 12.5 x 7.7	30.5 x 12.5 x 7.7	30.5 x 12.5 x 7.7	30.5 x 12.5 x 7.7	30.5 x 12.5 x 7.7
Weight with Safety Switch	7.75 x 3.5 x 1.72	7.75 x 3.5 x 1.72	7.75 x 3.5 x 1.72	7.75 x 3.5 x 1.72	7.75 x 3.5 x 1.72	7.75 x 3.5 x 1.72	7.75 x 3.5 x 1.72
Cooling	Natural Convection						
Notes	< 25						
Max. Operating Temperature	-13 to +140 / -25 to +150 (-40 to +150 version available <sup>(8)</sup> )						
Protection Rating	NEMA 3R						



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REVISIONS: BY:

05/21/13 MEG

08/08/13 MEG

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**SOLAR PHOTOVOLTAIC**  
**ARRAY SYSTEM**  
**WIRING SCHEMATIC**

DATE: 07/21/15

SCALE: AS NOTED

DRAWN: MEG

CHECKED:

CHECKED:

FILE NAME:

SHEET:

PV6.1

SHEET OF SHEETS